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# A Tool To Teach Heat & Temperature To Child & Scientist Alike



A Short Essay

by

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### **Abstract**

It is indeed a rare occurrence to encounter so grave a philosophy as occasioned by Climate Change, especially, within our Science; but, to be afforded an opportunity, so fortuitous, to enable overturning accepted theory is even rarer still. If one should allay, if only momentarily, hysteria conjured up by those more dire prognostications of this rather dreary eschatology, one should find their intellect free to reckon with a rather foolish error. There, at the heart of this turgid mess, lay its Achilles' heel, the Greenhouse Effect, which is its cornerstone premise and simultaneously its fateful undoing. It is by a childish error in judgment concerning heat that this troubling theory rest, a common misconception shared by elementary students, and is reminiscent of that now defunct and discredited theory of heat, the Caloric Theory. It is not to say, once understood, all mankind be exonerated, necessarily, from both his individual and collective behavior, which often affects environment, Self and Other so detrimentally; contrary, proper understanding does promise a more sober perspective towards what is more likely Man's influence upon the climate of our



"In quality of mind, it is depth that matters."

Lao Tzu, Tao Te Ching, Penguin Books (1963)

What is that *thing* we call heat? A seemingly simple question, with an equally simple answer; albeit, such elementary concepts are often enigmatic. When confronted by *everydayness*, one can easily find they are at a loss for words; such as it is with heat, it is ubiquitous, omnipresent, yet ethereal and incorporeal, almost imperceptible, but all together familiar and known.

The mind of Man is nothing more than an extension of his hand and, just as hand requires an object for grasping, so the designation of thingness is bestowed upon All that Man knows. To a child's mind, nothing is real unless it be susceptible to grasping, able to be clenched, taken and horded, for it would have no use otherwise. And it is with time that the mind of a child learns to grasp those concepts more abstract in nature, such as heat, love, God, &c; but, until such time has past, which is sufficient to temper tender minds, such ghostly concepts have the propensity to run amuck in a child's mind, causing frantic emotion and flights of fancy, hence, children are so susceptible to superstitious thought and easily believe all manner of fairytale.

It is more prescient to ask, "What is a thing," before inquiring about any particular thing. A Thing is that which can be seen, touched, known, moreover, implicit to thingliness are attributes decidedly definite, such as a demonstrable extension in space, duration in time, in short, a thing is something that can be caught, trapped or imprisoned through force of will or by deception. And, it is not uncommon for children to attribute that mysteriousness of independent thought to objects around them, for if child be a thing that wills and moves on its own accord, so too for all other things encountered in the world. It is a short step from this perception to a world filled with vengeful, spiteful gods and all manner of bugaboos, whom dwell among the dark, hide behind the veil of reality and await for us unaware to reach out and harm us, to possess us.

Of the three means by which heat may transfer from one body to the next: conduction, convection and radiation; it is conduction that most find most palpable and it is by virtue of some temperature gradient that any may know of work in this world, where work is force over distance. Through conduction heat straddles distance, this be work and transfers by virtue of kinetic information, communicating to neighbors the degree of that state of agitation. And, although, convection be the physical movement of some volume of matter, due to some temperature gradient, it is certainly tempting to begin to think heat a thing unto itself, but it is more of the same. Worse off, when one speaks of thermal radiation, for emission of light seems most ethereal to most, even if they should incorrectly think of only visible light, when I say—light. Yet, no matter the means of transference, it is simply matter communicating through space and time and that alone. And, though there be a conversation throughout the whole Universe, the aim of All is Entropy or that glorious and most desired state of equilibrium—the Heat Death of the Universe—that last orbit, where All is at rest and work is neither necessary nor desired.

It is common to find among our youth a set of misconceptions regarding heat that prove considerably difficult to dispel from their minds, for these concepts prove intuitive and self-evident, all based mainly upon the sense of touch, but also due to other certain common logical fallacies. It is by touch, children are first introduced to heat and come to know this phenomenon; but, equally, it is also by the touch of hand that error is born in the mind and, once established, can acquire unto itself a life of its own, where these fallacious beliefs can and do foster further derivative errant thoughts. Once held by the clutches of error, one may come to know their life as vain and realize all their works to be contingent upon that original fallacy.

The origin of that fanciful menagerie, where heat is perceived a wild and unruly beast, has already been stated, the hand; moreover, for demonstration, it is only required to look at common experience and how by sense of touch do all explore and come to know this world. On a hot summer day, children frequently find metallic objects hot to the touch, that is to say, hotter to the touch than what is presented by other nonmetallic objects, hence, children often conceive heat associated with certain objects and so, in their minds, do form what appears to them a most logical association. Of course, the heat transferred by a scorching Sun on a hot summer day is equal to all objects, but by touch do children begin forming their first concepts of temperature and heat. The opposite is just as likely, children can associate cold to metallic objects, for in the shade, metallic objects often feel cooler to the touch than other nonmetallic objects.

The reason metallic objects can feel either hot or cool to the touch is more to do with the thermal property of those chemicals, whereby, metallic objects generally possess a larger thermal conduction than dielectric bodies and, touching hot metal, heat more readily transfers to the skin of the hand, thereby, causing the receptors that reside in that hand to register a hotter temperature than if that hand should touch a dielectric body at equal temperature. So the same for the opposite case, whereby, heat from the skin of the hand is more readily transferred to the metal object touched, whisked away by that intrinsic property of metal, and do cause that hand to perceive an object cooler than dielectric objects at equal temperature.

Even though, in both cases, both metallic and nonmetallic objects may be at equal temperature, the sense of touch influences perception and often can lead astray the mind; but, touch alone does not fully explain the mind of children, it is common experience, in conjunction with imagination, that children make that final fatal step, imbuing a sense of free will to objects. Touch in concert with perception do form a lively world, indeed, heat becomes a wild animal, in the mind of a child, for heat is something to be caught, corralled and tamed, otherwise, heat will abandon, run away and leave desolate the poor wretch who failed to properly wrangle those unruly creatures known as heat.

Children often perceive mittens, blankets and coats possessing a strange property of warmth, whether for reason that these items are, "A source of heat," themselves, or by reason of *preventing* heat from the body running away or leaking out into the cold winter air, in either case, heat is perceived an intimate part of the object. When children think the item itself is a source of heat, then heat is an inseparable part of the item, where heat is somehow generated deep within the item, further, they may also think the amount of heat generated naturally increases with the size of the item, thus the larger the mittens, the more warmth. In a slightly more advanced conception of heat, children think heat to be a thing that is always trying to get away and things that warm are a type of fence to heat, corralling heat and preventing heat from getting away. In either case, those commonly held errant thoughts are not entirely their fault alone, for isn't it true that a parent will often say, "Put your coat on to *keep* warm." The concept of keeping implies retaining some disloyal entity, thus coat, mitten and the like *hold* heat, *keep* heat from escaping and *make* you warm.

It is not true that coats, blankets and other such items *keep* you warm, rather, these items make you *feel* warmer than you would without those items, more specifically, these items do not hold, retain or prevent heat from escaping your body, for the loss of heat is roughly equal with or without a coat, furthermore, it is by providing a layer of air close to your skin, which is naturally heated by the body, that the receptors in your skin are prevented from registering cold, otherwise, cold wind

would move and replace heated air surrounding your skin with cooler air and receptors in your skin would register things much worse than before. In fact, the body itself is a heat engine and must continually release excess heat, otherwise, the engine would break down for want to do work, that is to say, without a heat gradient, the functionality of the body would fail and death would be imminent.

A derivative misconception of heat is that, once a special object absorbs heat, the special object will refuse to release that heat stolen, as if the object jealously guards against anything or anyone taking away its hard-won prize, much like a child would refuse to let go some item he or she desired. Once a child conceives heat to be an intimate part of, say, metals, they often erroneously think metals can easily warm up—for their want of heat—but cannot easily cool off, thus with each portion of heat given to the object, heat compounds in the object, ever growing hotter and never cooling. To a child, there is rarely an upper limit, hence, their supple minds can easily grow frantic with the thought of a metal in flame, boundless are the consequences and easily think the temperature could reach that of the Sun itself.

These childish notions are quite quaint in themselves and provide endless fodder for gleeful laughter; but, it would appear that these common misconceptions do survive childhood to emerge in adulthood, worse still, among our scientist, who have graduated from University. For what else can one think when confronted by the so-called Greenhouse Effect of that most turgid and dreary eschatological theory known as Climate Change, also known as, Global Warming. This fatalistic theory states there exists special objects with which heat is intimately associated, moreover, the greater the size, the greater the cause for alarm, for Man risks overheating Earth to the point that life itself will not be possible!

"[The ambient temperature, daily experienced, upon Earth is due to...] the presence of greenhouse gases, which act as a partial blanket for the longwave radiation coming from the surface. This blanketing is known as the natural greenhouse effect. The most important greenhouse gases are water vapour and carbon dioxide. The two most abundant constituents of the atmosphere — nitrogen and oxygen — have no such effect."

IPCC Fourth Assessment Report: Climate Change 2007, FAQ 1.1: "What Factors Determine Earth's Climate?"

The above quote provides all the evidence necessary to gain insight into that childish notion of a greenhouse gas and the strange property these special gases seemingly possess, namely, that heat is both absorbed, emitted but never lost by these gases. Human psychology rarely fails to betray and it is clear, by the use of one word, what misconception of heat lay hidden within these hallowed words, bespoken by such an illustrious synod of scientists, namely, blanket. So it is this foolish theory implicitly and unwittingly claims heat be a thing, a thing to be captured, kept close and never to be let go!

The quote cites carbon dioxide and water vapour to possess that special quality, much like a child would think metals are naturally hot or that mittens provide warmth, so the same for these special gases, the greenhouse gases, for, by their mere presence, the Earth must give special thanks, otherwise, all life would perish, but equally, too much of a good thing can certainly lead to ruin.

It is true there are gases that exhibit absorption—and equally so, emission—of infrared radiation, a particular band of the electromagnetic spectrum of energy; but,

it is the ability to emit what has been absorbed that seems totally ignored by this concept of Climate Change. By some curious manner, heat is solely absorbed by special gases and never released, in fact, the situation is worse than that, at least, in their minds, climatologists shudder at the thought of increasing the amount of one of those special gases, namely, carbon dioxide.

Such foolishness, virilly, for the Earth has stood for Eons and throughout that time has the average global temperature experienced a graceful oscillation, between fifty and seventy degrees Fahrenheit; all the while, the mean global temperature oscillated without any regard to greenhouse gases, for carbon dioxide decreased from an incredible five thousand parts per million to the present-day three hundred or so parts per million—all this occurred over half a billion year span. And, it is true that Man has added some thirty six percent of carbon dioxide to the atmosphere, but no matter how much one may harp on this fact, this gas still only represents a paltry amount of our atmosphere, in other words, all effects are proportional to cause.

And, just the same as children do err, once heat is designated a thing do the errors seem to compound, because in addition to special gases being some strange source of heat, they also generate more heat out of sheer nothingness. As heat from the Sun passes through the atmosphere, besides that portion not absorbed by the atmosphere, a supposed process do occur, with potential catastrophic consequences, whereby, heat absorbed by greenhouse gases is re-radiated and yet absorbed again, continuously passed back and forth from the surface of Earth to atmosphere, and from this process alone, somehow, the amount of heat is imagined to grow boundless in the atmosphere as well as within the minds of our scientists. You see, it is explained to us all, by those believer scientists, that heat released by the greenhouse gases is reluctantly given over to the surface of this Earth, which then in turn re-radiates that energy back again to the atmosphere, to be absorbed, once again, by the special greenhouse gases and somehow by this special process does heat grow...now doubles, triples and still more grows in amount, for in their minds, the original quantity of heat released was truly never given away. Just as metals never cool, heat is never really given up by a special greenhouse gas, it would be anathema to do so, moreover, how could it give up what is generated within itself, for if it did, it would soon run out of heat, bankrupt and forever poor of heat; because, in their minds, there exists a limited supply of heat.

It is by this curious imagined process, of heat compounding upon itself, some-how creating more of itself, by simple virtue of itself, also, by simply passing back and forth from special gas to Earth that the temperature of our planet does increase without relief, moreover, because we burn fossil fuel, whose action does emit carbon dioxide as a byproduct, we risk sending the planet to a scorching finish. Climate Change warns the more carbon dioxide released into the atmosphere, then, necessarily, the more heat; because, in their minds, heat *is* generated by these special greenhouse gases.

This misconception is no better exemplified than with that commonly cited analogy of an automobile left to sit undisturbed in the hot, summer Sun, where convection is denied any apology. In their reasoning, Climate Change, the temperature rises above and beyond the surroundings by virtue of heat being trapped by the special greenhouse gases, much like an actual greenhouse or conservatory, where the Sun's rays are allowed to pass through glass, but somehow prevented escape. Once light enters the enclosure, greenhouse gases absorb and prevent that heat from ever escaping, this, they explain, is the reason your car is so hot! Thus, it seems, totally remiss not to inform all prisons, the world over, that solitary confinement, that is, a hotbox

fully made of metal or wood alone cannot suffice and that it is further necessary to install a window, no matter how small a window it may be nor seemingly kind, in order for the blazing Sun to do its dirty work, to pour in torturous heat. All humor aside, any enclosure would suffice to satisfy such cruel intent, with or without a window, no matter the material used in construction, of which, I am sure any poor soul—who suffered a sweatbox—could certainly attest, to be sure. One will measure higher temperatures in any enclosure, regardless if it were made of wood, metal or any other material; because, the temperature will rise due solely to the fact that the air contained within is trapped, that is to say, air denied free and equal exchange will reach thermal equilibrium. And, might I mention, that common household appliance the stove, for what good would any stove be if not for the enclosing? What of the temperature in your attic—do you think it due to the presence of a greenhouse gas?

It is a subtle difference between reality and fantasy, but the difference lay between what is heat, which is energy and not a thing. Without going into tedious particulars regarding the plethora of processes that do occur within the atmosphere, the upshot is whatever available energy is absorbed by the atmosphere, by whatever means, that in the end, the atmosphere presents a resultant heat capacity that we all owe and enjoy this temperate climate here upon this Earth. All chemicals possess some intrinsic capacity for heat, including nitrogen and oxygen, of which, both gases are curiously disregarded by climatologists and are denied the virtues of entropy, as if carbon dioxide can alone do work and no other.

Whenever an array of chemicals are mixed together, depending upon how well you may mix those components, the total physical behavior for the mixture is a result of some suitable addition of properties, proportional to the aliquot makeup for each constituent in the mixture. Of course, any failure to properly and evenly distribute those constituents throughout the whole mixture would result in pockets rich in one or another chemical, concomitantly, weighting the resultant property in favor of that excess chemical for that localé; nevertheless, with regard to the atmosphere, since climate is both averaged over time and space, the resultant property is proportional to the percent makeup for each participating constituent.

It is known that some seventeen percent of the incoming energy from the Sun is emitted in the form of thermal infrared radiation and about twelve percent of that energy does escape to space, hence, that leaves a paltry five percent of thermal radiation to account for in Earth's regal energy budget. Since the activity of thermal radiation is distributed among all those participating chemicals in the atmosphere proportional to their aliquot makeup, also, proportional to that spectrum uniquely enjoyed by each given chemical, and since carbon dioxide represents about four parts in ten thousand parts of atmosphere, then one can only conclude that this gas, carbon dioxide, contributes very little to the overall phenomenon; moreover, one may also conclude, given the scant amount of any other greenhouse gas in the atmosphere, that the vast majority of the five percent thermal radiation must be attributed to water vapour, which, by the way, is born out by experiment, for water vapour is known to be roughly four percent makeup of the atmosphere, on average. And, so, we are done... water vapour constitutes the major greenhouse gas—am I now to understand water a villain?

And, it is because these scientists believe only in special gases retaining heat that an increase in greenhouse gas would result in an ever larger temperature; but, it is their prejudice for absorption of heat alone, like a metal that only warms up and never cools down, that scientists have made the fundamental error of thinking that

greenhouse gases can only increase the amount of heat they hold and never release it. In the long history of Earth, there are indications of an ever so slight correlation between temperature and carbon dioxide levels, derived from the celebrated Vostok ice-core paleoclimate records, where a rough estimate of two tenth of a degree Celsius for every fifty six parts per million of carbon dioxide can be calculated; albeit, correlations represent a spread of possible values and the upper limit is not necessarily what will occur. Climatologists claim Man has added some one hundred parts per million carbon dioxide to the atmosphere since the beginning of the Industrial Era, thus at most we may suspect, using the estimate above, that Man has added an additional four tenths of a degree to the average temperature of our humble Earth.

For many, the apparent correlation between temperature and special greenhouse gas, no matter how small, may appear to prove the underlying hypothesis of Climate Change; but, correlations are a rather shaky type of relationship, indeed, just as the sense of touch may lead astray, so the same for thought itself, for nothing incites frenzy in the mind quite like pure randomness. Scientist know well the insidious nature of Bias and have developed the scientific method in order to safeguard against its corrosive, misleading influence; thus, it is imperative to first characterize the data at hand, identify what degree it is deterministic or purely random in nature. The latter characteristic, random, means many things; but, summarily, one should use caution in any perceived pattern or relation found within random datasets, for it would be similar to butterflies, chimeras and all manner of patterns perceived within a Rorschach inkblot-completely and utterly meaningless conclusions. Such is the present case, where the annual average global temperature anomaly can be proven to be a first order difference stochastic random process, that is to say, the rate of change in temperature, averaged over the entire globe per year, is a normally distributed random variable and, although this fact contains many ramifications, for our purposes, it is enough to point out that temperature cannot be predicted nor do any apparent correlations tied to temperature amount to a hill of beans.

The weather has posed to Science a rather ornery problem, where no amount of labour, either by hand, mind or supercomputer seem sufficient enough to enable meteorologists that prize sought: the ability to forecast the weather beyond a paltry four or five days. Climate Change advocates make great effort in their attempt to differentiate weather and climate, which is itself a clear indication of a real problem. They claim weather to be that which is experienced daily, in contrast, climate is experienced over longer periods of time. It is quite obvious, even to the dullest of men, that it makes no difference if one experiences weather for a day or reflect back on a lifetime of such experiences, thus, within one's own mind, do form a type of sum or average. In either case, either singly or cumulatively, climate is simply the integration of the weather over an arbitrary interval of time and there is nothing remarkable about the act of summation; the sum of elements inheres the natural units intrinsic to those elements. It seems Nature, once again, will not comply to the incessant wiles from her enthusiastic suitors; thus, scientist have all but given up their quest to generate a perfect weather model, at least the more honest of them; but, there still are scientist who refuse defeat and have convinced themselves that they will somehow succeed with climate where they formerly failed with weather.

The bias of Climate Change is also painfully evident in exactly how apparent correlations are interpreted, for example, it is immediately assumed an increase in carbon dioxide means, necessarily, an increase in temperature, never mind paleoclimate records show temperature rising first, then carbon dioxide following suit after the fact; worse still, the bias being so strong for their belief, the very same scientist

do err further and often simultaneously claim the very opposite to be true, that a rise in temperature will increase carbon dioxide, in other words, the runaway Greenhouse Effect. Virilly, one can sum up Climate Change as thus, *no matter what, it's going to get hot*. What science! The evidence for the desired conclusion can always be found...

Have any given thought the possible relationship between carbon dioxide gas and temperature is one limiting the other, instead of encouraging, that is, with an increase in carbon dioxide, the intensity increases for thermal radiation emission, thus capping the overall height in temperature, even though, any such affect would be vanishingly small, given the paltry percent makeup of this gas in our atmosphere. On the other hand, water vapour can and does fluctuate wildly, anywhere from one to five percent and I am sure higher still, especially, if the long history of Earth be taken into account. And, given the available water here on Earth, one can easily imagine percentages of ten or higher still, plus, with such a dramatic increase in a greenhouse gas, the concomitant thermal radiation emitted to outer space would naturally increase as well, in other words, water would function as a release valve, providing a means for kinetic energy of the molecules in the atmosphere to transform into thermal radiation.

It is curious to understand how a few gases, water vapour and carbon dioxide, represent the majority of the heat in our atmosphere, yet nitrogen and oxygen, which combined makeup some ninety nine percent of our atmosphere, play no role whatsoever, at least, according to the supposed consensus among scientist. All the energy absorbed into the atmosphere, by whatever means, is shared among all the chemical constituents in the atmosphere and given the vast majority of the atmosphere is comprised of nitrogen and oxygen, then it is to them we owe our thanks and gratitude for such a hospitable planet. It would seem the tendency to misplace merit and credit has infected our learned panel, the State sanctioned synods of scientists, to pass right over the two most important gases in our atmosphere and place the crown upon the most insignificant—carbon dioxide.

And as disturbing as all this might be, the fact that some sort of consensus exists amongst our learned scientist, parroting the above misconception of heat, is most disturbing of all, for what is the state of our halls of learning if such dribble be possible. Be it as it may, such notions are not unique to children, scientist nor our Times, but were equally believed by earlier scientist, when first attempting to conceptualize heat. Scientists struggled immensely in the early history of Science to properly understand heat, for it seemed at one point in time that this phenomenon would elude every attempt at capture. One of the earliest attempts at grasping heat was tried by Chemists in the late part of the seventeenth century, a certain Johann Joachim Becher proposed a fire-like substance called Phlogiston. This strange substance flowed in and out of matter through pores and was not only that thing which caused heat, but was heat itself and fire was Phlogiston escaping from the pores of some combustible. Obviously, what does it say about other objects that do not burn or is it that they are deficient in the amount of Phlogiston held within or is it due to their jealous retention of Phlogiston that we may attribute their refusal to burn...in other words, one can easily see that heat conceived as a thing leads to many problems and suffice it to say that this now obsolete theory of heat was a smashing failure; although, it served men well in these early times, aiding and providing them light enough to find their way to enlightenment.

In about a centuries time, Phlogiston was on its deathbed and there were many a stubborn scientists that refused to admit defeat; nevertheless, Antoine Lavoisier pro-

posed his theory of heat in the latter half of the eighteenth century, which likened heat to a "subtle-fluid" he called Caloric. Similar to Phlogiston, in that it was a thing, there were two additional properties proposed along with Caloric theory of heat, firstly, there was a constant quantity of Caloric in the Universe and secondly, this substance had the propensity to flow from warmer to colder bodies. The last property is spot on and has survived to this day as an indelible part of the three Laws of Thermodynamics; yet, even though one of the two properties proposed by Lavoisier happens to be correct, the premise that a constant quantity of heat-substance exists...call it Phlogiston, Caloric or whatever you may like, but attributing the likeness of a substance to heat is the common error in thought shared by all failed theories of heat. Slowly, scientist realized that heat is not a thing unto itself, but is simply energy, in other words, temperature is the measure of the energetic state of matter and scientists realized conservation of energy was more in keeping with Nature.

I have recounted this brief history of Science and heat to inform you that scientists do err, indeed, and those errors can easily last a century or more; thus, it is very likely that Climate Change will take some time yet to fully dismiss, but in the meantime, we can all sit back and laugh with glee, much as we do with our children. By the way, Caloric theory of heat was put down by the end of the ninetieth century with the firm establishment of our modern concepts of heat; albeit, there is something quite seductive about perceiving heat a thing and not only survives in the mind of children, but apparently, among our learned scientist as well. Because, much as a child's notion of heat, the Greenhouse Effect imbues into specially chosen objects the property of heat, similar to children, they too also think that more of an object necessarily means more heat. And, no matter how much one may be inclined to agree, how exactly are we to believe the musings of our learned scientists or explain to our children the world is likened to a prison sweatbox, only, one with a view?

Before closing, it would be remiss not to mention another stupidity intrinsic to Climate Change, even worse than the above mentioned misconception of heat, which would be the hypothesis made, a hypothesis so fundamental to this childish theory that it forms its namesake. Of all possible hypotheses, I'm speaking as a scientist for the moment, there is scant any hypothesis more poorly constructed, nothing could be more ambiguous than "climate change", in other words, there is nothing more sure than to propose the climate *will* change; it's akin to saying, "The Sun will either rise or set tomorrow." Such hypotheses cannot possibly be rejected nor accepted. Virilly, who would ever place their faith in the weather!

The theory of Climate Change is more religion than Science. It teaches original sin, guilt and redemption; all requisite elements for that christening. Even if the end is nigh, so claims this rather dreary theory, it is certain, if all that remained on Earth were a few paltry humans, forced to reside upon a single battered oasis, which somehow proved immune to ceaseless pommeling by an enraged planet, whose hatred would be commensurate with temperature, it is certain such people would give thanks for life and would trudge on regardless, for what can be said of Man during the great Ice–Ages of past or any other such dramatic calamity attributable to climate. And if one should argue that the difference be in making liable Man, his Industry and insatiable desire, you would be wrong, for history is replete with religiosity adorned with fearsome gods, who often denied life–giving rain, brought down unrelenting plagues and a host of other Ills upon the collective head of Man for all manner of perceived offending actions, worse and most unfortunately, history proves Man susceptible to this form of seduction, whether it be his love for self–loathing, weakness of the mind or some other reason yet imagined, yet results in frequent cycles of ma-

nipulation by the few to orchestrate and herd Mankind according to some hidden design.

In some sense, Climate Change is a throwback to an earlier Time, to a time when men projected all their psychological fears into the night, upon the sky and all things that surround them, in short, this dreary theory is nothing more than superstition. Even though there be no real cause to rebuke that admirable moral espoused, namely, to curtail Man's impact upon his environment; what is cause for alarm, though, are attempts to marry this New-Age religion to the modern State. Consider Galileo Galilei, his precarious struggle made against Pope Urban VII, the State of that Time and the powerful Jesuits. How dangerous a Time we live, to bear witness to Man's dogged nature flirting with religion, courting State favour and risk capitulating—once again—our Science to the dearth of tyrants and superstition. As history has proven, time and again, whenever Church and State work in unison, men generally reflect upon that friendship with the greatest of regrets.

Albeit, such notions be humorous, the fact some contemplate basing governmental policy upon this apparent truth belies the serious nature of all this tomfoolery; for, regardless of sentiments, the very real scarcity of natural resources and how dwindling resources can dampen the intensity of Empire, threaten the hunger and comfort of so many, yes, this is very real, indeed. And, how effete is it to claim fossil fuels pollutants, worse, they threaten life on this planet and to then follow that up with platitudes for further continuance of a fossil fuel based society. The only real difference lay in some clever, crafty political device that either taxes fuel use and consumption, which would permeate to affect every product known to Man, or by subterfuge, designed to woo developing nations into gullibly signing up for what can only be described as energy–slavery, for the true intent of the Elite is well known to All, moreover, what possible use could any such energy law possess, but: to deny the Other what is jealously guarded by the One.

Prudent, thoughtful and courageous planning comes only from somber knowledge of reality, regardless of how unpleasant, which includes dispensing with dreams of perpetual motion and accepting the unfortunate fact that *sustainability* is absolutely unattainable, for no engine can attain perfection—so saith Carnot. Yet, it is certainly within reach for Man to grasp greater efficiency, even if it means transforming our existing economic engine to something less wasteful and more spendthrift, indeed; furthermore, after putting away such childish wants for whirligigs, gizmos and other such mesmerizing gadgets, including analytical engines of all kinds, only then would it be conceivable to expand that inevitable event horizon, peak—oil, further into the distant future.

There still are many among us that are willing and capable of having a serious conversation about a world overburdened by demand and an ever hastening disappearance of natural resources, moreover, admitting the simple fact that fossil fuels are limited is no real feat in itself. There are solutions far better than just panicking nor would it be fair to say the vast majority of the world populace cannot and would not give serious consideration to the plight we now face—and have always faced. Virilly, there is nothing new under the Sun, including climate, scarcity and the plight of Man. What is certainly vital, though, be truth, not just in words and thought, but in conversation and if some think it fine to tinker with the emotions and minds of the general public through social engineering and tout some trumped up consensus, then any real solution to any real threat will go unanswered, for a house built upon lie cannot stand.